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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,092	08/21/2001	Bernardus Hendrikus Wilhelmus Hendriks	PHN 17,870	9202

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
BATTAGLIA, MICHAEL V	
ART UNIT	**PAPER NUMBER**
2652	

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)	
	09/914,092	HENDRIKS ET AL.	
	Examiner	Art Unit	
	Michael V Battaglia	2652	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 01 September 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☒ A Notice of Appeal was filed on 13 September 2004. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

3. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached Response to Arguments.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☒ For purposes of Appeal, the ~~proposed amendment(s)~~ request for reconsideration a)☐ will not be entered or b)☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: 5.

   Claim(s) rejected: 1-4 and 6-20.

   Claim(s) withdrawn from consideration: _____.

8. ☐ The drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

10. ☐ Other: _____

Continuation of 3. Applicant's reply has overcome the following rejection(s): The rejection of claim 5 under 35 U.S.C. 102(e) rejections over Maruyama and the rejection of claims 4,5 and 9 under 35 U.S.C. 102(e) over Nakai et al.

HOA T. NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

This action, dated October 21, 2004, is in response to Applicant's remarks, filed September 1, 2004.

Allowable Subject Matter

1. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the references of record alone or in combination disclose or suggest an optical head for scanning an optical record carrier having an information layer, the head comprising a radiation source for generating a radiation beam, an optical system for converging the radiation beam to a focus on the information layer along an optical axis, the optical system imparting a temperature-dependent first wavefront deviation to the radiation beam, and a compensator arranged in the radiation beam for compensating the first wavefront deviation, characterised in that the compensator comprises a phase structure of a material having temperature-dependent properties, the phase structure having the form of a plurality of annular areas forming a non-periodic pattern of optical paths of different, temperature-dependent lengths, the optical paths forming a second wavefront deviation compensating the temperature-dependent first wavefront deviation, wherein the annular areas each have a width measured radially from the optical axis and a consistent height measured along the optical axis; wherein the differences between the optical paths are multiples of the wavelength of the radiation beam for at least one temperature and **wherein at least one of the multiples is equal to two or larger.**

Response to Arguments

2. Applicant's arguments filed September 1, 2004, with respect to claims 1, 2, 6-8, 10, 12-16, 18 and 19 rejected under 35 U.S.C. 102(e) as being anticipated by Maruyama, have been fully considered but they are not persuasive.

In regard to claims 1 and 8, the diffraction grating is a phase structure because it changes the optical path lengths of the radiation beams that travel through it and as a result, adjusts the phase of the radiation beams (Col. 4, lines 34-38). The diffraction grating made of a material having temperature dependent properties (Col. 2, lines 10-15). It is noted that the claims do not require the phase structure to be rectangular in shape. Like the plastic lens optical system of prior art, the optical system (Fig. 1, element 10) of Maruyama imparts a temperature-dependent wavefront deviation to the radiation beam (Col. 2, lines 5-7, 10-12 and 18-20) that is a change in spherical aberration in the overcorrected direction. Fig. 1A shows that the plurality of annular areas form a non-periodic pattern. Fig. 1C and Col. 4, lines 34-38 and 51-56 disclose that the annular areas are a pattern of optical paths of different, temperature-dependent lengths. Lastly, applicants point to Fig. 1C to show that the height, measured along the optical axis, of each annular area is not consistent in the circumferential direction when Fig. 1C is a cross section of the diffraction grating that is cut by the plane of the radial direction and the direction of the optical axis and has no bearing on the consistency of the height in the circumferential direction. The height of the annular areas, measured in the direction of the optical axis, is consistent in the circumferential direction because the height at any location of each annular area does not change along the circumference of the diffraction grating having the same radial distance from the center of the optical disc.

In regard to claims 2 and 10, see Col. 4, lines 51-53 and Fig. 1.

In regard to claims 4 and 9, the diffraction grating corrects for spherical aberration in the optical system due to changes in temperature. At a base temperature, there will be no change in temperature and at least this one base temperature, the optical paths will be a multiple of the wavelength of the radiation beam so that no spherical aberration correction occurs.

In regard to claim 6, see Col. 4, lines 41-46.

In regard to claims 7, 12-15 and 18, Applicant's arguments rely on the unpersuasive arguments that claims 1 and 8 are allowable.

In regard to claim 14, only that the optical system includes a diffractive structure is claimed.

In regard to claims 16 and 19, see Fig. 1C.

3. Applicant's arguments filed September 1, 2004, with respect to claims 1, 2, 8, 10-15, 17, 18 and 20 rejected under 35 U.S.C. 102(e) as being anticipated by Nakai et al (hereafter Nakai), have been fully considered but they are not persuasive.

In regard to claims 1 and 8, the diffraction grating is a phase structure because it changes the optical path lengths of the radiation beams that travel through it and as a result, adjusts the phase of the radiation beams. It is noted that the claims do not require the phase structure to be rectangular in shape. The height of the annular areas, measured along the optical axis, is constant in the circumferential direction.

In regard to claims 2 and 10, the diffraction grating corrects the spherical aberration imparted by the optical system, thereby allowing the spherical aberration to remain substantially unvarying.

In regard to claim 11, the diffraction grating corrects the defocus imparted by the optical system, thereby maintaining the focal point.

In regard to claims 12, 13, 15, 17, 18 and 20, Applicant's arguments rely on the unpersuasive arguments that claims 1 and 8 are allowable.

In regard to claim 14, only that the optical system includes a diffractive structure is claimed.

In regard to claims 17 and 20, the diffraction grating of Nakai corrects for wavefront deviations due to changes in temperature. There must be a base temperature at which no change in temperature exists. At that base temperature, the diffraction grating will correct for nonexistent wavefront deviation by supplying no wavefront deviation itself and the phase change will be an integral number of 2 pi phase changes so that no deviation will occur to the wavefront.

4. Applicant's arguments filed September 1, 2004, with respect to claim 3, have been fully considered but they are not persuasive because the arguments rely on the unpersuasive argument that Maruyama does not anticipate claim 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V Battaglia whose telephone number is (703) 305-4534. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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